

**Nuclear Data Section
International Atomic Energy Agency
P.O.Box 100, A-1400 Vienna, Austria**

Memo CP-D/637

Date: 6 May 2010
To: Distribution
From: S. Dunaeva, N. Otsuka

Subject: Conclusions and Actions of the 2010 NRDC meeting

Please find attached a draft of the Conclusions and Actions of the 2010 NRDC meeting in Sapporo.

Please give your feedback about any mistakes or omissions by the end of May. The complete meeting report, including also a meeting summary, the status reports of the centres and part of the working papers, will, as usual, then be published as an INDC report.

All changes from the previous version is shown in red. According to agreements with KAERI and JAERI, C7 (KAERI's responsibility) and A62 (notification of JENDL-4.0 release) are newly added to the previous version agreed during the meeting.

Remember also that the status reports, working papers and PowerPoint presentations presented at the meeting are available from our NRDC web page (http://www-nds.iaea.org/nrdc/nrdc_2010/).

Distribution:

blokhin@ippe.ru	n.otsuka@iaea.org
chiba@earth.sgu.ac.jp	nrdc@jcprg.org
claes.nordborg@oecd.org	oblozinsky@bnl.gov
emmeric.dupont@oecd.org	ogritzay@kinr.kiev.ua
ganesan@barc.gov.in	otto.schwerer@aon.at
gezg@ciae.ac.cn	pronyaev@ippe.ru
hongwei@ciae.ac.cn	r.forrest@iaea.org
jhchang@kaeri.re.kr	samaev@obninsk.ru
j.roberts@iaea.org	s.babykina@polyn.kiae.su
kaltchenko@kinr.kiev.ua	scyang@kaeri.re.kr
katakura.junichi@jaea.go.jp	s.dunaeva@iaea.org
kato@nucl.sci.hokudai.ac.jp	stakacs@atomki.hu
kiralyb@atomki.hu	stanislav.hlavac@savba.sk
l.vrapcenjak@iaea.org	taova@expd.vniief.ru
manuel.bossant@oecd.org	tarkanyi@atomki.hu
manokhin@ippe.ru	varlamov@depni.sinp.msu.ru
mmarina@ippe.ru	vlasov@kinr.kiev.ua
mwherman@bnl.gov	vmclane@optonline.net
nicolas.soppera@oecd.org	v.zerkin@iaea.org
nklimova@kinr.kiev.ua	yolee@kaeri.re.

CONCLUSIONS AND ACTIONS

Conclusions

General

- C1 It is important to have EXFOR Workshop for compilers as addition to technical NRDC-meeting. EXFOR Workshop will be held in Vienna, Austria, end of August, 2010.
- C2 The next technical NRDC meeting will be held in Vienna, Austria, 23-24 May 2011.
- C3 EXFOR Workshop will be in Vienna, Austria, 25-27 May 2011
- C4 The next full NRDC meeting will be held in Paris, France, second quarter of 2012.
- C5 NRDC confirmed new edition of Protocol and Network Document. Corrections can be made by Centres in two months after NRDC-2010 meeting
- C6 NRDC agreed that EXFOR Workshops in National Centres are very useful and should be supported.

EXFOR, General

- C7 KAERI will be responsible to compilation of neutron, charged-particle and photon induced reaction data. Entries will be submitted through NDS.
- C8 It was emphasized that delays in checking preliminary TRANS files must be reduced to one month.
- ~~C9 It was emphasized that delays in compilation of new articles have been reduced (merged into C11)~~
- C9 The changed scope of compilation during 2009 has shown:
 1. Improved completeness through scanning of journals by two Centres (NNDC and NDS);
 2. No help in reducing delay in compilation;
 3. Creation of a certain number of duplication pairs in the database leading to conflicts.
- C10 NRDC agreed to return to geographical area in compilation responsibility.
- C11 Statistics of new article compilation was satisfactory, however the time for compilation should be reduced.
- C12 In cases of no well defined responsibility NDS will distribute articles for compilation if there is more than three months delay in allocation.

CINDA

- C13 Old agreement on CINDA compilation (WP2003-25, item 2) was cancelled. Centres willing to be responsible for CINDA entries will send their entries to NDS (WP2010-21).
- C14 Centres agreed to continue production of CINDA through automatic export from EXFOR and NSR databases, possibly using EXFOR “dummy” Entry (WP2010-22, 23).

C15 Theoretical works and reviews will be accepted in future CINDA transmissions.

EXFOR, Technical

C16 NRDC concluded that it is impossible to keep a list of authors' e-mail addresses. However, NRDC agreed, where possible, to help each other in finding particular authors' e-mail addresses. **See also A46.**

C17 NRDC agreed to keep only E-RL for relative energy as it doesn't depend on the frame of reference.

C18 NRDC concluded that adding a compiler's name in HISTORY is not obligatory. Regardless of the compiler's name, the Centre is responsible for the compilation.

C19 NRDC agreed that, while many optional codes that can be used in an Entry, a compiler only needs to include them in the Entry if he/she thinks it is important for the description of this particular experiment.

C20 The proposal on fission quantity coding has now been accepted. (Memo CP-D/599).

C21 The proposal on clarification of usage of MLT and PY in LEXFOR has now been accepted (Memo CP-D/619).

C22 The proposal on update of LEXFOR "General Quantity Modifiers" has now been accepted (Memo CP-D/621).

C23 The proposal on data type DERIV for data measured by indirect reactions such as surrogates has now been accepted (Memo CP-D/582).

C24 The proposal on reaction coding of the fields SF1-SF2 has now been accepted (Memo CP-D/607).

C25 The proposal on adding examples in LEXFOR concerning usage of reaction combinations has now been accepted (Memo CP-D/614).

C26 The proposal on correction of units and quantity codes in prompt fission neutron spectra has now been accepted (Memo CP-D/635).

C27 NRDC agreed that it is important to add actual reference information under STATUS of compilation. This rule will be added into LEXFOR.

C28 NRDC agreed that intermediate states unstable against prompt particle decay will be coded when the states are exclusively identified by the experiment

C29 The proposal of new evaporation residue production cross section quantity is now accepted. The draft for LEXFOR chapter on fusion is also accepted (Memo CP-D/626).

**C30 If DOI is found through Internet, it can be included in new entries, starting with symbol "#" in a new line after the relevant reference. (Memo CP-D/604)
(Moved from Action)**

C31 Obsolete code SIG/SUM (Memo 4C-4/175 rev) will be changed to SIG in retransmission. (Moved from Action)

EXFOR Software

C32 It was emphasized that compilation tools are available for downloading from the NRDC Webpage.

Actions

General

- A1 Otsuka Correct titles of EXFOR Manuals according to contents.
A2 Otsuka Add all standing actions to the NRDC Protocol.
A3 All Send all corrections that have to be made in Protocol (WP2010-02) and Network documents (WP2010-03) within one month.

EXFOR General

- A4 All (Standing Action) All Centres should give highest priority to compiling new publications.
A5 All Give high priority to compilation of papers from the ND2010 (Jeju, Korea) conference.
A6 Otsuka Discuss with Organizers of ND2010 possibility of getting data from authors at the same time as acceptance of paper for publication in proceedings
A7 Otsuka Add flag on the NRDC web page “List of corrections” for important corrections. See also A8.
A8 Otsuka, Mikhaylyukova, Schwerer, Dupont, Furutachi, Babykina, Taova Complete all important corrections (flagged) within three months. See also A7.
A9 Herman, Otsuka, Zerkin Find algorithm of automatic DOI number creation and issue Memo.
A10 Zerkin Investigate possible problems of automatic adding of DOI number to original EXFOR Entries and create software.
A11 All (Standing Action) Scan national journals and send results to NDS. See also first proposal of WP2010-14.
A12 NDS (Continuing Action) Develop sensible means of communication of numerical data between authors and NRDC for the major journals.
A13 All (Continuing Action) Make efforts to change all remaining upper case entries to lower case. On retransmission, the old entries should be checked and any other necessary corrections must be made.
A14 Zerkin (Continuing Action) Further develop EXFOR+ (interpreted/extended EXFOR format).
A15 Zerkin Issue documentation for C4 and XC4 formats.
A16 Otsuka (Continuing Action) Update Dictionaries every four months.
A17 Zerkin (Continuing Action) Every four months produce an EXFOR distribution with (a) full Dictionary distribution; (b) EXFOR in C4 and XC4 format; (c) Dictionaries in MS

Access; (d) X4Map and X4Archive.

- A18 Zerkin (Continuing Action) **Generate and distribute** list of errors to NRDC after every new EXFOR/CINDA dictionary transmission.
- A19 All (Continuing Action) Correct errors within the Centre's area (see also list in WP2010-09 to 11); all mistakes from such lists (produced according to Memo CP-D/623, 627 and 633) should be corrected in the next transmission.
- A20 Zerkin (Continuing Action) Include DOI in EXFOR DB as defined in WP2009-25.
- ~~A21 All (Continuing Action) If DOI is found through Internet, include DOI in all new entries, starting with symbol “#” in a new line after the relevant reference. (Moved to conclusion.)~~
- A21 Zerkin (Continuing Action) Regularly export ~~from~~ full EXFOR to ~~C4 and~~ XC4.
- ~~A23 Zerkin (Continuing Action) Regular update of EXFOR correction system (WP2010-19). (Combined with A44)~~
- A22 Zerkin (Continuing Action) Add hyperlink on the main EXFOR page to the EXFOR User Manual.
- A23 Otsuka (Continuing Action) Send list of errors, based on analysis of the list formulated by OECD-NEA WPEC subgroup 30, to responsible Centres.
- A24 Dupont (Standing Action) Distribute JANIS-TRANS Checker Log list on every preliminary TRANS-file.
- A25 Otsuka, Gritzay Asses the way to store numerical data of incident particle spectra used in generation of averaged quantity data compiled in EXFOR.
- A26 Hlavac Delete duplication from area 1, C and L according to the third proposal in the WP2010-14.

Common EXFOR/CINDA dictionaries

- A27 Hlavac, Otsuka (Continuing Action) Investigate Dictionary 25 for differences in labels and units (e.g.: MUB, MU-B and MICRO-B used for 'µb'), with the aim of achieving consistency.

CINDA

- A28 Dupont (Continuing Action) Search for experimental and mixed entries in which the target is coded by MNY, and replace with individual isotope/compound entries as outlined in WP2008-36.
- A29 Dupont (Continuing Action) Correct errors detected during CINDA loading procedure, as described in WP2008-36.
- A30 Dupont (Continuing Action) Correct all CINDA lines, as described in WP2009-30

A31	Zerkin	Regular export from EXFOR DB to CINDA
A32	Zerkin	Regular export from NSR to CINDA
A33	All	Add CINDA lines manually on voluntary basis
A34	All	(Standing Action) Create “dummy” EXFOR file if it is impossible to find experimental data.
A35	Pikulina	Develop the EXFOR Editor software to create a “dummy” Entry for CINDA record creation. (Moved to A62)
A35	Zerkin	All “dummy” EXFOR files should be added to CINDA DB after conversion to CINDA line (by V.Zerkin’s program). Prepare tools for creating CINDA file from EXFOR “dummy” Entries.
A36	Zerkin	Periodically update the CINDA master file and distribute it to other Centres.

EXFOR Technical

A37	Otsuka	(Continuing Action) Review the various types of gamma spectra in EXFOR, as well as the related quantities and units.
A38	Otsuka	Make code E-RL-CM obsolete
A39	All	(Standing Action) When coming across report codes in Dictionary 6, which differ significantly from what is shown on the report cover, submit additional explanation to NDS for inclusion.
A40	All	(Standing Action) Run CHEX in TRANS mode (not DATA mode) when checking new entries or TRANS files, to make sure that all important errors are found.
A41	All	(Continuing Action) Check error lists available on the NRDC Webpage, and correct as soon as possible (see also WP2009-02, WP2010-09).
A42	NDS	(Standing Action) Assess the need for undertaking both trivial and non-trivial compilation corrections, and inform responsible Centres.
A43	Zerkin	(Continuing Action) Development of a new database encompassing correction factors and relevant comments for suspect/erroneous data (X4-evaluated) presented in WP2010-19; Specify the format and issue an appropriate Manual; keep NRDC informed about conclusions of discussions on new database. keep NRDC informed about conclusions of discussions on new database.
A44	Otsuka	(Standing Action) Add this action to EXFOR Manual: “Use alteration flags in col. 11 of ENTRY and SUBENT lines in retransmission (also optional for all corrected lines in col. 80)”.
A45	All	According to the list of Entries with NODATA one of the following corrections has to be made: (a) Restore numerical data from old EXFOR backup in retransmission if data were not superseded before in this Entry; (b) Delete Subentry, or the whole Entry, if it is real

- duplication in reference and data, as well as adding a comment in HISTORY;
- (c) Add SPSDD under STATUS when it is applicable;
- (d) Digitize numerical data if the quality of the figures is enough for digitization, if SPSDD not applicable, and if the article was published before 2000;
- (e) Add UNOBT and comment if it is impossible to digitize the data and the article was published before 2000;
- (f) Try to find numerical data if the article was published later than 2000.
- A46 All (Continuing Action) If an author's e-mail address is impossible to find through Internet, try to find it with the help of NRDC collaboration. **See also C16.**
- A47 Otsuka Add phrase in LEXFOR Manual concerning the particular source of the data:
"...The actual source from which the numerical values given in the data set were taken must be entered in free text under STATUS only as the well defined reference as it is coded in REFERENCE lines" (WP2010-29).
- A48 Pikulina Add to EXFOR-Editor automatic addition of reference information under STATUS keyword.
- A49 All According to the list in WP2010-31, make corrections for averaged kinetic energy and most probable kinetic energy, mass and charge (KE, AKE, KEP, KEM, AP, AZ) after checking original articles.
- A50 Otsuka (Continuing Action) Make all corrections and additions in LEXFOR Manual according to the adopted NRDC-2010 decision (WP2010-13, WP2010-29, WP2010-31 to 39).
- A51 Otsuka (Continuing Action) Prepare final version of Memo "Uncertainty propagation in TOF-data".
- A52 Otsuka (Continuing Action) Correct LEXFOR and EXFOR formats Manuals according to WP2009-17 for the keyword INSTITUTE.
- A53 Dupont (Continuing Action) Send list of incorrect authors' names and titles to NRDC participants.
- A54 Dupont (Continuing Action) Prepare full list of recommendations for spelling of nuclides and mathematical expressions in free text of EXFOR entries.
- ~~A55 All~~ ~~(Continuing Action) In retransmissions change obsolete code SIG/SUM (Memo 4C-4/175 rev) to SIG.~~
(Move to Conclusion)
- A55 Otsuka Distribute list of Entries with obsolete code SIG/SUM (Memo 4C-4/175 rev) still existing in EXFOR DB.

EXFOR software

- A56 All (Standing Action) Inform each other about EXFOR-related software being used and/or developed.
- A57 All (Standing Action) Provide feedback on the digitizing software GSYS to JCPRG.

- A58 All (Standing Action) Provide feedback to NDS on the existing CHEX version (on bugs as well as desired additions)
- A59 Sarov (Continuing Action) Continue development and testing of the EXFOR-Editor in cooperation with NDS and other data Centres, taking into account compilers' remarks.
- A60 Pikulina **Develop the EXFOR-Editor software to create "dummy" Entry.**
- A61 All (Continuing Action) Provide feedback on the JANIS – TRANS Checker code to NEA DB.

Evaluated data libraries

- A62 Katakura **Notify other centres when JENDL-4.0 is released.**